

POPULATION PROBLEMS IN THE BRITISH CARIBBEAN*

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A FEW years ago, at the time of the Report of the Royal Commission on Population, thought in this country was directed towards the problems of a population which was producing insufficient children to ensure the maintenance of its present numbers. Since that time, however, there has been a growing awareness that the world in general is facing a very different problem, one of uncontrolled population increase which in many areas is already outstripping the capacity for food production.

One of the areas where this problem is becoming acute is the British Caribbean, where the island territories are already thickly populated, and there is no prospect that the rapidly increasing population can be adequately provided for. Lord Simon of Wythenshawe illustrated this very effectively in his 1954 report on the *Population and Resources of Barbados*.† The report stated, briefly, that the land in Barbados is fully given over to its best use, which is the production of sugar cane; the prospects of industrialization are poor, so the future prosperity depends upon the sugar crop which cannot be expanded any further or, so far as can be seen, cultivated more efficiently than at present—and already there is considerable unemployment and under-employment in the island.

The general picture of the whole Caribbean area is one of low wages and widespread substandard housing accommodation. The standard of living is very low: the national income per head in Jamaica in 1947 was estimated to be about one-quarter of that in Great Britain. The capital invested in the area is about one-tenth of that of the United Kingdom on a *per capita* basis. The area is

very largely dependent upon the fortunes of the sugar crop which accounts for about half of all Caribbean exports but which varies with the annual rainfall. This one-crop economy results in considerable off-season unemployment.

From this area have come an increasing number of coloured migrants to the United Kingdom in recent years. Various estimates have been made as to their numbers but in round figures the annual number of arrivals appears to be about 25,000 and the total to date probably 80,000 or 90,000. This is a sizeable inflow of migrants who, because of the difference in the colour of their skins, remain conspicuous and who for this and other reasons may be less easy to absorb than the (so far) more numerous refugees from central Europe.

Analysis of Population by Area and Race

The several island Colonies in the area (with the special exception of the Virgin Islands) have combined to form the West Indies Federation whose capital is to be in Trinidad. It had been hoped that the two remaining British Colonies in the area, the mainland territories of British Honduras and British Guiana, would decide to join the Federation, but recent developments suggest this to be a forlorn hope in at least the first of these. Nevertheless, I have included all these territories in my examination in order to present as complete a picture as possible of the whole British Caribbean area.

If we study a map of the area we see that long distances separate the different territories. From British Honduras in the west to the island of Jamaica is a distance of about 800 miles and a similar distance separates Jamaica from the Leeward Islands of Antigua, Montserrat, St. Christopher-Nevis and the Virgin Islands. From the Leewards,

* A paper read at a Members' Meeting of the *Eugenics Society* on May 22nd, 1957.

† Privately printed. See *EUGENICS REVIEW* 1955. 46, 196.

the chain of islands including the Windward Islands (i.e. Dominica, Grenada, St. Lucia and St. Vincent), Barbados and Trinidad and Tobago stretches a further 800 or so miles to British Guiana.

The area of all the islands put together is about 8,000 square miles—or about one-seventh of the size of England and Wales. Jamaica accounts for more than half and Trinidad and Tobago for one quarter of this. British Honduras contributes a further 8,000 square miles or more. British Guiana however, measures ten times this area, over 80,000 square miles and thus contains five-sixths of the total land area.

The population is distributed very differently. British Guiana with five-sixths of the land has less than one-seventh of the population, while Jamaica with less than one-twentieth of the land area has more than three-sevenths of the population.

We may look at this another way by considering the population per square mile. Again it may be helpful to use England and Wales as a yardstick but it must be borne in mind that ours is a highly industrialized community importing food to live whereas industrialization is negligible in the Caribbean. Furthermore, allowance should be made in any comparison for the different proportions of the countries which are habitable. In England and Wales there are about 760 persons per square mile. Generally speaking, the islands have about half this number with the exception of Barbados which has nearly double, about 1,360 persons per square mile. The two mainland territories, on the other hand average about six persons per square mile, less than 1 per cent of the number in England and Wales. The coastal strip, of course, will show a higher density than this if considered separately.

One feature stands out, and that is the contrast between the small over-populated island territories and the vast sparsely-populated territories on the mainland. When Federation was first planned, it had been hoped that the mainland territories, in particular British Guiana, would be able to absorb the overflow population from the islands. Their unwillingness to participate

in the Federation, however, appears to have dashed this hope.

The last censuses of the populations of the British Caribbean area were held in 1946, except in the case of Jamaica where the enumeration took place earlier, in 1943. (In the latter months of 1953 a sample survey of Jamaica was carried out, but no data have so far been published.) A block diagram has been prepared of the numbers recorded at the census in the various colonies divided according to racial group; the total population of each colony is measured by the area of the block. Of the total population at that time, Jamaica accounted for nearly half and Trinidad and British Guiana together for another one-third.

POPULATION OF BRITISH CARIBBEAN AT 1946 CENSUS
(JAMAICA 1943)

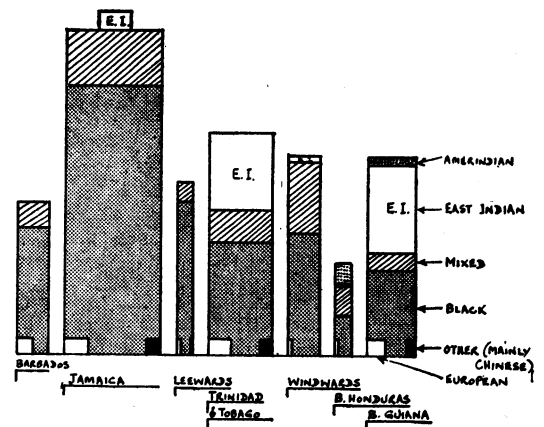


FIGURE 1

It will be seen that the population of the area is composed of a mixture of many races. The largest racial group is of African descent, from negro slaves liberated more than a century ago. The next largest is the mixed group arising mainly from the miscegenation of negroes with members of other races, notably Europeans, although a multitude of other racial intermixtures are also represented here. These two groups form over 80 per cent of the whole. Apart from the small number of Europeans, American Indians and Caribs, the only remaining racial groups of significance are the East Indian populations in British Guiana and Trinidad and

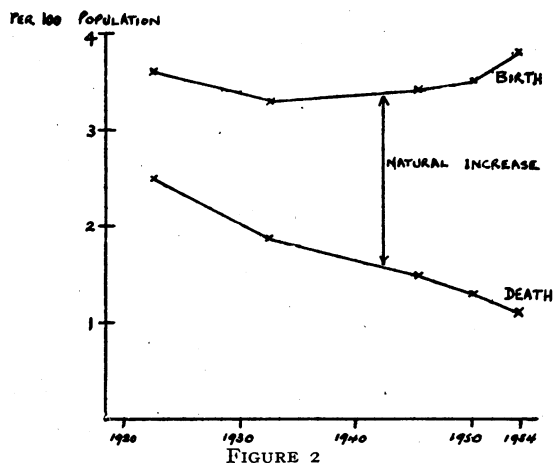
Tobago. These groups of East Indians claim special attention in any examination of the demography of the area, because of their homogeneity and particularly because of their very high fertility (which will be discussed later). They arrived, or are descended from those who arrived, in the latter half of the nineteenth century from India, Burma and Ceylon as indentured labourers. At the time of the 1946 census they accounted for 35 per cent of the population of Trinidad and Tobago, and 44 per cent in British Guiana, and these proportions have since increased.

Annual Population Increase

The total population of the area is by now approximately $3\frac{1}{2}$ million. Sixty years ago it was half this size, but the rate of increase has not been the same over the whole of the period. For the first forty years or so the rate of increase was about 1 per cent per annum, but after that it increased steadily and is now over 2 per cent per annum. These figures, however, are affected by migration, in particular by the recent migration to this country and it is instructive therefore to examine also the crude rates of birth and death since 1920. Figure 2 below

BRITISH CARIBBEAN

CRUDE RATES OF BIRTH AND DEATH



shows that the crude birth rate has always been high, but latterly has increased even further to about $3\frac{3}{4}$ per cent; the death

rate, however, has fallen steadily from $2\frac{1}{2}$ per cent to just over 1 per cent. The rate of natural increase, which is the difference between the two, has therefore increased from 1 per cent per annum to about $2\frac{3}{4}$ per cent per annum.

This annual increase of $2\frac{3}{4}$ per cent per annum on a total population of about $3\frac{1}{2}$ million results in an addition of nearly 100,000 persons each year for whom food, clothing, shelter, education, employment and so on must be provided. The mainland territories appear to offer the only hope that this can be achieved within the British Caribbean area. Even a continuation of the present volume of migration to the United Kingdom, perhaps 25,000 per annum, could account for only one-quarter of the annual increase.

The crude death rates for the different colonies show that the considerable improvement in mortality has been experienced in all of them. The crude birth rates, however, reveal significant differences between the several colonies. In Jamaica and Barbados it is somewhat lower than the $3\frac{3}{4}$ per cent average: correspondingly, in the two mainland territories and in Trinidad and Tobago it is higher, about $4\frac{1}{4}$ per cent. These latter areas are thus seen to be experiencing a rate of natural increase in excess of 3 per cent per annum which is exceeded in very few parts of the world today.

Mortality

The considerable improvement in mortality already referred to has resulted in a position where the crude death rate in the area, just over 1 per cent per annum, is at the same level as in this country. We might find this surprising in view of the different standards of living, did we not know that the age distributions in the two regions are very different. We cannot but be aware that in this country there is a large and growing proportion of old persons, a feature which is not present in the Caribbean Colonies, and which must result in a higher average death rate than would otherwise be the case.

A more revealing mortality comparison can be made by calculating the number of

deaths expected among the population in the British Caribbean subdivided by sex and age, were they to experience the mortality rates current in this country, and comparing the results with the deaths which actually took place. Such a comparison for the year 1954 shows actual deaths to be about double those expected were Great Britain mortality rates to apply. Males under the age of five suffer about four times as great a loss from mortality as in Great Britain; over this age the factor falls steadily to about one and a third times at ages over sixty-five. For females, the pattern is similar although the excess over Great Britain is somewhat larger than for males. There is thus seen to be considerable room for further improvement in mortality in the area, in particular at the youngest ages.

Although the crude death rates indicate that there is now little to choose between the mortality of the different colonies, there are in fact differences which have been consistent for a number of years. Mr. G. W. Roberts gave examples in his note on mortality in Jamaica published in *Population Studies*.^{*} He indicated that Trinidad and Tobago show much lower mortality rates than Jamaica at ages under ten, whereas at ages over forty Jamaica consistently shows rates well below those of Trinidad and Tobago or any other West Indian colony; that Jamaica shows infant mortality rates well below the high rates in Barbados, but in childhood and adolescence Barbados shows rates much lower than those of Jamaica.

Infant mortality rates, i.e. the number of deaths under one year of age per thousand births, deserve special mention in view of their use as an index of social advancement. In 1954 they varied from sixty-one in Trinidad and Tobago to 109 in Barbados, i.e. from more than double to four times the rate in this country. It would appear that there is still much to be done in improving standards of child welfare and nutrition, and more in some colonies than others.

One further feature of the mortality experience is worthy of note. In Great Britain, mortality rates for women are

lower than those for men at all ages, but this is not the case in the Caribbean. The mortality rates in the three largest colonies for example, all show an excess of female over male mortality, in Jamaica between ages five and twenty-five, and in Trinidad and Tobago and British Guiana over most of the child-bearing ages. It is tempting to jump to the conclusion that this feature is attributable to the much higher frequency of child-bearing in the Caribbean.

Fertility

We come now to what is perhaps the most interesting and important demographic feature of the British Caribbean, the fertility. There are two main sources of data on this subject. The first of these is to be found in the answers to questions put to all women over fourteen years of age at the census, as to how many live born children they had had, if any. The second is in the records of birth registrations. We thus have information on what is usually termed the "stock" and "flow" of family building in the area.

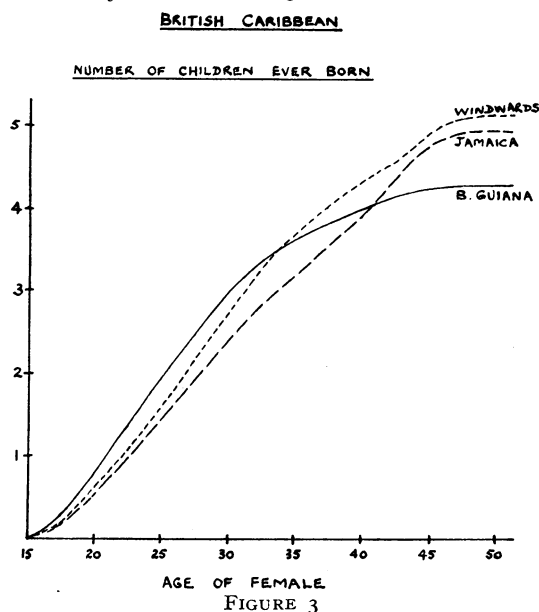
There are, however, considerable difficulties in interpreting the results because of the different generations of women concerned. For example, at the census women over the child bearing ages are recorded as having given birth to about five children on average in Jamaica, while in Trinidad and Tobago and British Guiana the figure was only four and a quarter, i.e. completed families were about three-quarters of a child smaller in the two last mentioned colonies. On the other hand, for women in their twenties the position was reversed, Jamaican women having had half a child fewer than women in the other two colonies. We could explain this in a number of ways. First, that in Jamaica family building starts at a later age but continues apace at ages when births are falling off in the other two colonies and ultimately reaches a higher level. Alternatively, it may be that younger women are building their families at quite a different rate from the older generation; in Jamaica they may be having smaller families than their mothers, while in the other two colonies they may be having larger families,

^{*} 1950. 4, 64.

or it may be that both of these things are happening. It cannot be ruled out, however, that memories may be different in the various colonies. If there were circumstances in Trinidad and Tobago and British Guiana which resulted in older women, or some of them, forgetting or not counting some of the children born to them, children born many years earlier a large proportion of whom may have died soon after birth, then clearly any deductions we might make from the data so obtained would be vitiated.

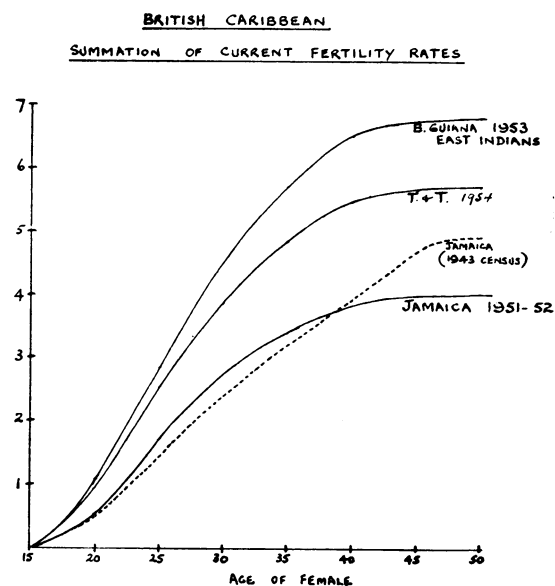
Data from the second source, i.e. birth registrations, have been tabulated in the majority of cases by age of mother. We can relate these to the numbers of women at different ages in the population and thus obtain issue rates, i.e. the chance that a woman of a particular age will give birth to a child. By summing these rates progressively over the fertile age span we obtain the family build up determined by a continuation of the underlying issue rates. Once again, however, we have a mixture of generations in the issue rates obtained in any particular year for different ages of mother.

The following diagrams show the increase in family size with age in certain of the



territories according to these two sources of data. Figure 3 shows clearly the quicker

build up of families in British Guiana relative to Jamaica among young women, although older women at the census had apparently had the larger families in Jamaica. The joining up of the figures for the successive age groups to form a graph recording increase of family size with age can be criticized because of its mixing of different generations of women and of data of different degrees of reliability, but it does present the data in an easily understandable form. Figure 4 shows the relationship between



family size and age according to current issue rates. The dotted line repeats the curve for Jamaica from figure 3 for purposes of comparison. The indication is that a continuation of present fertility rates will result in completed families in Jamaica smaller than those recorded in the 1943 census, but much larger in Trinidad and Tobago and in British Guiana. (The highest of the curves shows the very high fertility experience of East Indians which will be examined more fully a little later.)

Reproduction Rates

It is a small step from the completed family sizes implicit in current fertility rates to the calculation of Gross Reproduction Rates. If we multiply the completed family

size by the proportion of births which are female, we obtain the female Gross Reproduction Rates. The Gross Reproduction Rate for the whole of the area is 2.4, but it varies, for example, from 2.0 in Jamaica to 2.8 in Trinidad and Tobago. The excess of male births over female in the area varies from year to year and from colony to colony, but generally averages perhaps half of the 6 per cent excess current in this country, but for the purpose of these broad comparisons the excess has been ignored and half of all births assumed to be females.

A better measure of the extent to which women at the fertile ages are currently reproducing themselves in the next generation is the Net Reproduction Rate, which allows for mortality taking its toll before the children born will grow up and replace their parents. In this country the N.R.R. is currently about 1.0 indicating, with some reservations, approximate replacement. In the British Caribbean, the N.R.R. is about 2.0 which suggests that the population will double itself in a generation. This is consistent with the crude rate of natural increase of $2\frac{1}{2}$ per cent per annum already mentioned which, if continued, will double the population in a little over twenty-five years.

Fertility of East Indians

Mention has been made in reports emanating from the Caribbean area of the phenomenal reproductive performance of the East Indian communities in British Guiana and Trinidad and Tobago. This racial group is given the credit for the relatively very high crude birth rates in these territories, and not without justification. The Registrar General for British Guiana has published figures relating to the East Indian section of the population which show the crude birth rate to exceed 5 per cent. The crude death rate is just over 1 per cent as for other sections of the community, leaving a natural increase of almost 4 per cent per annum. The rate of natural increase for all races in British Guiana is only a little over 3 per cent, so that for races other than East Indians the rate must be about $2\frac{1}{2}$ per cent.

Fertility data available from the census are subdivided according to racial group, and indicate that in both British Guiana and Trinidad and Tobago East Indian women of all ages have given birth to a greater number of children than women of the same age belonging to other racial groups. For families complete at the time of the census (i.e. women over forty-five) the figure was five children for East Indians and four children for other races.

Current fertility rates for East Indians are not published but they can be estimated by combining data of births and populations available for British Guiana and Trinidad and Tobago. The rates produced are very high indeed and figure 4 above showed how they built up to a completed family size of nearly seven children. The Gross Reproduction Rate is 3.4, and allowance for mortality produces a N.R.R. of 2.8. We have already mentioned that the population of the British Caribbean as a whole appears likely to double itself in a generation. We now see that it will not require a great deal further improvement in mortality at the youngest ages or increase in fertility for East Indian parents to produce sufficient children to replace themselves three times over in the next generation. All this of course is on the basis that the current high fertility rates are stable and not a transient feature.

One consequence of the high fertility of this racial group has been its increase as a proportion of the total population. In British Guiana since the war East Indians have increased from 44 per cent to 47 per cent of the population of the colony. Looked at another way, while East Indians accounted for about one-third of the children born some sixty years ago, they now provide more than half the births in the colony each year. It is only a matter of time therefore, before East Indians comprise over half the total population of British Guiana, and perhaps of some political importance, over half the electorate. The growing importance and power of East Indians in British Guiana is one reason mentioned for that colony's reluctance to join the Federation where they feel they might become a helpless minority.

Conjugal Condition and Illegitimacy

The latest available statistics show that about 60 per cent of children born in the British Caribbean territories are illegitimate. The figures for the separate colonies vary considerably, but they are all extremely high and are indicative of the rather unusual family forms among coloured peoples in the area. The subject is most interesting but also most complex, and has been dealt with much more thoroughly than can be attempted here in a paper by Mr. G. W. Roberts, "Some Aspects of Mating and Fertility in the West Indies," published in *Population Studies*.*

The tradition of the unstable family has its origins in slavery. As Mr. Roberts puts it:

The slaves, uprooted from various environments and thrust into oppressive slave regimes where the maintenance of stable family unions had no social or economic advantage to slave owners and where in fact formal marriage was often not allowed, inevitably experienced a dissolution of their traditional family patterns. The subsequent introduction of marriage ordinances based on English law wrought no basic change; the formation of unions by means other than formal marriage continued . . . marriage in the West Indies does not always signify the establishment of a union. Many, if not the great majority of marriages represent no more than the cementing of unions long in existence . . . demographically it [marriage] does not necessarily connote commencement of the exposure to the risk of child-bearing.

As an example of conditions in the area, figure 5 below indicates the marital status of women of different ages in Jamaica in 1943. The pattern is very different from this country where there is a steep rise to 80 or 90 per cent married. The proportion legally married rises slowly and to a not very high 45 per cent or so. On top of that we have the consensually married, i.e. cases where a permanent union has been established but where the marriage has not been registered. The remainder are termed single but this will include women who have formed a temporary union, a not uncommon arrangement in the Caribbean. It is interesting to observe the trend of the two lines beyond the

late thirties. The proportion legally married is still increasing at a time when in this country it has flattened out or even started to fall as a result of widowhood and divorce. The simultaneous fall in the proportion consensually married suggests this to be caused by Mr. Roberts' "cementing of unions long in existence."

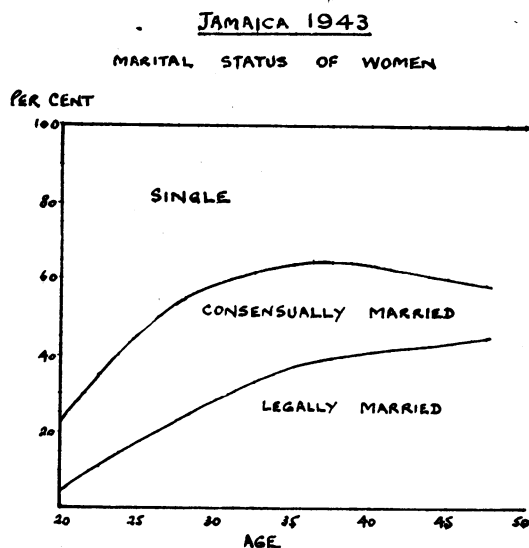


FIGURE 5

It is interesting to consider the connections between marriage and fertility in the light of these proportions. If the present small proportion married were to increase it might be reasonable to expect an increase in fertility, not only because of a more stable family life, but also on a strictly arithmetical comparison of the continuous exposure to risk of childbirth in the married state with the interrupted exposure over a series of "keeper unions." There may indeed be a connection between the higher fertility of East Indians and their more stable family conditions. On the other hand, it is not impossible that a change in outlook as regards the desirability of formal marriage might be accompanied by a desire to limit the size of the family.

Future Population

Having completed the examination of mortality and fertility we are now in a position to make a more scientific estimate

* 1955, 8, 199.

of the future population. The present population of each sex in five year age groups has been projected in five year steps over the next twenty-five years, using survival factors based on mortality rates half way between the present rates here and in the Caribbean, i.e. allowing for some continuation of the recent improvement. Births in future years were calculated on the assumption that current fertility rates would continue. The result is once again a population doubling in just over twenty-five years, one in which the present low proportion of old persons continues (about 4 per cent over sixty-five) as does the present very high proportion of children (about 40 per cent under age fifteen). The problem in the Caribbean is not of a growing proportion of old persons, but of growing numbers at all ages.

Education and Literacy

The growing numbers of children forming such a high proportion of the population (the 40 per cent compares with 22 per cent in this country), must be expected to impose a considerable strain on the educational system. This strain is certainly being felt in Jamaica. The 1953 Colonial Report for Jamaica states that enrolment in schools is only about four-fifths of the school age population, that attendance does not average more than two-thirds of enrolment, and that with the exception of some urban centres there is not sufficient accommodation to make attendance compulsory. In these circumstances we are not surprised to learn that of children aged ten to fourteen in Jamaica at the census, 18 per cent of boys and 11 per cent of girls were illiterate. These however, are the highest rates for any of the Caribbean Colonies. Elsewhere the degree of literacy among ten to fourteen's was generally high, of the order of 98 per cent; exceptions to this were found in some sections of the community which were at a disadvantage because education is based on the English language.

Population Pressure and Migration

The population pressure is seen, therefore, to be increasing and with it the urge to

migrate in search of work and a higher standard of living. Migration has long played an important part in the area. Prior to 1921 the movement of emigrants from Jamaica and Barbados to the American Continent (notably Panama) and Cuba played a large part in checking population growth, but the subsequent period saw employment opportunities for emigrants dwindle considerably in consequence of changed economic conditions and new legislation, and there resulted a net migration in the return direction. Following the second world war the islands were faced with growing unemployment which could not be relieved through migration to countries that had formerly received large numbers of West Indian immigrants. Great Britain on the other hand was experiencing a manpower shortage, news of which started the wave of migration which has not yet abated. Indeed it has been suggested that the present flow might increase but for the limited number of passages available and the limited number of persons able to pay for them. It is odd to think that any progress made in the way of raising the standard of living in the area may result in an increase in the number of persons migrating on becoming able to afford the fare.

It is not difficult to see why there is this large movement of population from an area where death and disease are still higher than they might be, where wages are low, unemployment widespread, educational facilities stretched to their utmost, and where the future holds out little prospect of improvement, to this country to which they are admitted without question as British citizens (in particular, without medical examination which is in contrast to conditions for admission to other Commonwealth Countries), where wages are much higher, where unemployment in recent years has been negligible and then covered by insurance benefits, where education is available to all according to need, and where medical facilities are freely available. The Government in Barbados has gone so far as to subsidize migration and to provide migrants with a booklet of advice on adapting themselves to the change of environment. In Jamaica, however, the main

force is said to be in the activities of travel agents painting glowing pictures, sometimes too glowing, of conditions in this country.

In the circumstances it is difficult to foresee any slackening of the flow of migration so long as employment opportunities continue to be available in Great Britain. If this country experienced a trade recession, however, the position might be very different, but more important than the effect such a recession might have on the flow of migrants would be its effect on the employment of the coloured workers who are already here. They would be among the first to fall out of work in view of their lack of seniority—last in, first out, is the rule. In addition to this, it has been suggested that there might be resentment among workpeople born locally at the retention of coloured migrants in time of general unemployment.

Fortunately, no trade recession of any magnitude has occurred, but there are other problems already being faced by the immigrants. Two of these, of which we read in the press, are the provision of living accommodation and the problem of the unmarried mother. The latter is the result of the Caribbean background where we have seen no stigma attaches to illegitimacy, but in this country, as we know, more important than any social stigma there might be is the physical difficulty of a young mother trying to be both guardian and breadwinner at the same time. She cannot do both, and to find someone with whom to leave the child, or children, while she goes to work is an almost impossible task, however straightforward it might be in the Caribbean. As a community, we are geared to a way of life in which each family looks after its own children without help and tends to expect others to do likewise. It is very far from certain that the flow of coloured migrants from the West Indies to Great Britain is not creating more problems than it is solving.

Birth Control

So far no mention has been made on the subject of birth control, but it will be quite clear that some move in this direction provides the only permanent solution to the

problem of increasing numbers in the British Caribbean area, as elsewhere. Migration can provide an immediate though temporary alleviation of the position, but it would have to be on an increased scale. The importance of reducing the birth rate has been realized in Barbados where a committee was appointed by the two Houses of the Legislature to examine the question of over-crowding. The following are extracts from their report which was presented in 1954:

The Committee is completely convinced that this problem can no longer be left to the sporadic and unorganised efforts of a few individuals and that the Government must take action.

It points out that if early action is not taken, the result must be an increasingly lower standard of living with consequent misery for everyone. . . .

The first objectives of the health programme should be the development of means whereby the birth rate is reduced as rapidly as modern science and services have reduced the death rate. It is therefore recommended most strongly that family planning be incorporated in the work of the Health Centres immediately, and that the work be extended as soon as possible to embrace the General Hospital, the Maternity Hospital, the almshouses, and all privately-run Maternity Child Welfare Clinics.

It is recommended that Family Planning Clinics should be set up and be operated directly by the Government.

It is believed that this forthright report is beginning to bear fruit in Barbados, but no information can be found on the views of the other territories on the subject of birth control except a small paragraph appearing in the 1954-55 Colonial Report for St. Vincent under the heading "Planned Parenthood."

In accordance with the official policy of the St. Vincent Government there is no systematic teaching of birth control, nor are there any family planning or planned parenthood organizations operating in this colony.

It is to be hoped that the other territories will soon be converted to the Barbados way of thinking, and that we shall see throughout the West Indies Federation an awareness of the population problem confronting the

area, a realization of the crucial part to be played by family planning in its solution, and of the urgent necessity to take active steps in the matter.

DISCUSSION

During the discussion which followed Mr. Stewart's paper, Mr. G. W. ROBERTS said: I should like to begin by complimenting Mr. Stewart on his able paper. He has dealt with the problems of West Indian population in an excellent manner.

I should like to add something to what he has said about migration and fertility as components of growth, with special reference to Jamaica. And as many questions have been raised this afternoon concerning West Indian migration to Britain it seems best to begin with this. The movement is of very recent origin. It seems that the possibilities of West Indians obtaining remunerative jobs in the United Kingdom were first made known to those coming to serve in the armed forces or to work in factories during the last war. The movement they initiated developed swiftly after 1953 and by 1955 had reached such dimensions that the Government of Jamaica, apprehensive of its possible effects on the island's labour force, arranged for a study to be made of it. This will be published shortly, but perhaps members will like to learn something about its main findings.

The movement was increasing by about 10 per cent per month in 1953 and by 13 per cent in 1954. By 1955 the island was experiencing a monthly loss of 900 males and 510 females, as compared with 110 and 70 respectively in 1953. The movement to the United Kingdom (there were, of course, small numbers emigrating to other countries, and these are included here) has been:

YEAR	MALE	FEMALE
1953	2,100	1,500
1954	6,000	3,500
1955	11,600	6,800
1953-55	19,700	11,800

It began with mostly skilled workers. (The term skilled is of course not strictly in accordance with English usage.) But in 1955 increasing numbers of unskilled workers were being involved. Whereas early emigrants were drawn mostly from the town of

Kingston, by 1955 a large proportion were rural dwellers, while increasing numbers of illiterate persons were leaving for Britain.

The effects of emigration on population growth in Jamaica have been marked. In 1953 the overall increment to the population (mostly from births) was 52,300. This rose slightly to 54,300 in 1954 and in 1955 stood at 57,200. On the other hand decrements to the population rose impressively as a result of mounting emigration. In 1953 there were 15,400 deaths, and emigration to all destinations totalled 3,800, but by 1955 emigration (18,900) exceeded deaths, which remained almost unchanged in number. Thus within three years emigration had become the principal source of loss to the population, and resulted in a reduction of the annual rate of growth from 2.2 per cent in 1953 to 1.5 per cent in 1955.

More important has been the effects of emigration on the growth of the island's labour force. Over the three years more than 60 per cent of the males emigrating to the United Kingdom consisted of men claiming some degree of skill, such as mechanics, electricians, masons and carpenters. On the other hand mostly unskilled workers, such as dressmakers and domestic workers, were involved in the case of the females.

Crude estimates of the increments and decrements among the male labour force bring out forcibly the effects of emigration. It is estimated that in 1953 the annual increment to the male labour force was 8,600. In 1954 male emigration rose to 6,000 and the increments to the male labour force were down to 4,700. By 1955 when emigration reached 11,600 the increment was converted to a loss of 700. In 1953 these crude estimates indicate a rate of growth for the male labour force of 2.3 per cent; this declines to 1.2 per cent in 1954, while in 1955 the indication is of a loss of 0.2 per cent. The high proportion of skilled workers involved has meant that the skilled sector of the labour force has been seriously affected. Evidently the number of skilled workers emigrating has greatly exceeded the estimated number of accessions.

It is therefore clear that the present

emigration, though constituting a seemingly welcome curb on population growth in Jamaica, may not be an unqualified advantage for a country crying aloud for industrial development.

Fertility in the West Indies demands close study not only because of the very high levels prevailing, but also because of the complex mating patterns involved. These have already been adequately considered by Mr. Stewart. But I should like to raise an issue of some relevance, the relation between movements in fertility and the improvement of the health of the population.

Attention to this has already been drawn by the claim, made in respect of British Guiana, that the control of malaria has

resulted in a rise in fertility. Though this remains an unproved assertion in the light of the parallel fertility rise in Trinidad, the relation between health and fertility remains a real problem. Recent campaigns specifically directed against yaws but equally effective against venereal disease, have suggested very strongly that the control of the latter diseases will result in marked rises in general fertility levels. If penicillin succeeds in reducing sub-fertility as it reduces the incidence of yaws and venereal disease the reductions in fertility expected from campaigns for the spread of contraception will be nullified. This is one indication that fertility control may not be as easy as it seems.

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